United Nations A/CN.9/960

General Assembly

Distr.: General
30 May 2018

Original: English

United Nations Commission on International Trade Law
Fifty-first session
New York, 25 June–13 July 2018

Work programme of the Commission

Legal aspects of smart contracts and artificial intelligence: submission by the Czechia

Note by the Secretariat

The Government of Czechia submitted for consideration of the Commission at its fifty-first session a document on legal aspects of smart contracts and artificial intelligence. The document, as received by the Secretariat on 30 May 2018, is reproduced as an annex to this note.

V.18-03778 (E) 050618 060618

Please recycle

Annex

Note submitted by Czechia on legal aspects of smart contracts and artificial intelligence

1. Czechia would like to bring to the attention of the United Nations Commission on International Trade Law (UNCITRAL) the desirability of closely monitoring legal developments in the field of smart contracts and artificial intelligence with a view to undertaking work in this field when appropriate.

Smart contracts

2. Recent years have seen an increase in the automation of contracts, i.e. in the possibility that certain contract-related actions are performed on the basis of pre-programmed code and without human review or other intervention. Automation may occur at different stages of the life cycle of the contract: conclusion, performance and execution. Smart contracts may allow significant benefits in terms of speed, execution costs and contract governance, including with respect to monitoring of contract performance.

3. UNCITRAL has already prepared provisions relevant to legally enable the use of smart contracts. In particular, article 12 of the United Nations Convention on the Use of Electronic Communications in International Contracts, 2005, provides for the use of automated message systems for contract formation, and article 6 of the UNCITRAL Model Law on Electronic Transferable Records recognizes the possibility of inserting in an electronic transferable record information, including metadata, additional to that contained in a transferable document or instrument. However, awareness of those provisions seems limited. Moreover, emerging business practices may suggest the formulation of additional provisions or legal guidance. Those issues have been discussed at the UNCITRAL Congress "Modernizing International Trade Law to Support Innovation and Sustainable Development", held on 4–6 July 2017 in Vienna, to celebrate UNCITRAL fiftieth anniversary, whose proceedings are available.

Artificial Intelligence

4. The phenomenon of the artificial intelligence (AI) has been discussed in law and legal science already since 1960s. Since 2010, the interest of lawyers in AI has increased rapidly. The most probable reason for this shift lies not only in growing use of AI in everyday life, but especially in specific legal challenges imposed by the technology.

5. A number of definitions of AI exists. None of them, however, have been universally accepted. Generally speaking, AI is a science of developing systems capable of solving problems and performing tasks by means of simulating intellectual processes. AI can be taught to solve a problem but it can also study the problem and learn how to solve it by itself without human intervention. Different systems can reach different levels of autonomy and can act independently. In that regard, their functioning and its outcomes are unpredictable as those systems act as "black boxes".

6. Nowadays, AI plays an important role in the current trend of automation in the EU, called Industry 4.0. AI is presumed to change economic functioning of companies and have a huge impact on the society. Recent public debates have especially focused on the necessity to regulate the very field of AI and to set boundaries in order to prevent development of so called artificial general intelligence, i.e. an intelligent system comparable to or even exceeding human intellectual capacity. Moreover, the debates point out a necessity to teach AI systems ethics and incorporate in them values that are recognized in the society.

7. These debates are justified and should be taken into consideration. However, they are a part of a bigger problem relating to the insufficient approach to AI by the society. This includes non-uniform understanding of what AI is and how it should be

used for our benefit. Moreover, current laws have not yet recognized the specific features of AI that, in fact, significantly influence dynamics of legal relationships, such as business contracts, liability disputes and investments.

8. In the area of private law, several challenges may arise, which become even more complex when seen from the perspective of different jurisdictions. The first issue relates to contracts based on which services or systems with AI are provided. For instance, contracting parties need to deal with uncertainty about the scale of due diligence with regard to designing algorithms or possible liability for malfunction of the system, while being unable to predict future behaviour and having no control over its future use and data input that might importantly affect the AI system. From a technical point of view, it may be impossible to justify the reason for a particular decision of AI. Therefore, in case of damages, parties are in an evidentiary vacuum and may be unable to determine liability lacking specific provisions. The law needs to set up clear rules and balance obligations in order to protect both parties to a contract as well as third parties who need certainty on where to seek redress for damages.

9. Given the fact that AI technology and services based on AI often involve different jurisdictions, parties need efficient means to protect their interests. Without a coordinated international approach, some States might intentionally avoid adopting specific rules in order for companies to use their unfit laws for escaping liability. Given the capabilities of AI systems, for instance in data analysis, as well as the widespread use of adhesion contracts, this might negatively impact interests of various stakeholders.

10. Apart from predictive analytics, trend analysis, data mining or automation, AI is used also for assistance in everyday tasks and can facilitate transactions of different type for its users. The legal attribution of transactions performed by AI systems is also unclear. AI systems may be considered as electronic agents by which parties enter into legal transactions and are bound by them. However, some companies may test the legal system by creating AI applications that act on their own behalf and have own goals and purposes while the author remains concealed. Even more complicated situation arises when AI created by another AI system interacts with human beings. So far, there is no satisfactory legal solution.

11. The same is true for extra-contractual liability. As mentioned above, determining liability may be particularly challenging due to lack of evidence as well as involvement of a number of persons whose liability is hard to assess. Moreover, insurance may not cover all the situations in which damage occurs.

12. According to recent research, the business community is concerned about future legal developments in this field. Lack of rules and guidelines prevents companies from designing AI systems that would be accepted and trusted by business. Therefore, companies are reluctant to invest in AI systems development. Only solutions accepted at the international level may guarantee the safe and responsible development of AI while safeguarding both social and economic interests.

13. The international community should focus on all the mentioned issues as soon as possible before the problems related to artificial intelligence and its application, including robotics, will receive partial and non-systematic solutions at the national levels. Such partial solutions would prevent cross-border collaboration among companies or provision of services due to need to comply with various legal standards, increased rate of trade disputes, as well as increased uncertainty about return on investments. Therefore, liability issues, due diligence, contracts on AI systems as well as status of AI and attribution of its legally-relevant acts, to name a few relevant issues, should be analysed and addressed. Without systematic and international solutions, different approaches to common problems would hinder the global opportunity provided by the AI. Traditional methods of regulation are not fully applicable, therefore, a new approach should be found by the international community.

Future steps

14. In light of the above, it is submitted that UNCITRAL should require the UNCITRAL Secretariat, within existing resources, to monitor developments relating to the legal aspects of smart contracting and artificial intelligence, and report to the Commission, in particular, by identifying areas that may warrant uniform legal treatment. This work should be done in coordination with other relevant organizations, namely the International Institute for the Unification of Private Law (Unidroit), the Hague Conference on Private International Law, and other entities. In that respect, it should be noted that the International Organization for Standardization has set up the Technical Committee ISO/TC 307, on "Blockchain and distributed ledger technologies".

15. In Czechia, The Institute of State and Law of the Czech Academy of Sciences started intensive public discussion of artificial intelligence, autonomous systems as well as self-driving cars in 2017. It intends to deepen societal understanding of these topics by organizing an international conference on artificial intelligence and law in Prague (5–6 September 2018). This event may offer a convenient opportunity for discussing the subject. Therefore we would like to invite experts in this field as well as other persons interested in this subject to participate in the conference.

V.18-03778